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ABSTRACT

This monograph addresses the role of gifted education in total school improvement by describing three service delivery components (the Total Talent Portfolio, Curriculum Modification Techniques, and Enrichment Learning and Teaching) and several organizational components of the Schoolwide Enrichment Model (SEM). The report describes how the SEM can serve as a structure for schools trying to develop the talents of all students. It describes each of its three components: (1) the total talent portfolio, a vehicle for systematically gathering and recording information about a student's abilities, interests, and learning style preferences; (2) regular curriculum modification including curriculum differentiation, provision of in-depth learning experiences, and integration of enrichment activities; and (3) enrichment learning through provision of enrichment clusters to multi-age heterogeneous groups of students. The report also addresses schoolwide enrichment and educational reform, key ingredients of school improvement, a gentle and an evolutionary (but realistic) approach to school improvement, and starting the school improvement process. Twelve frequently asked questions about schools for talent development are answered. A glossary is attached. (Contains 25 references.) (DB)

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Building a Bridge Between Gifted Education and Total School Improvement

Joseph S. Renzulli, Ed.D.
The University of Connecticut
Storrs, Connecticut

January 1995
RBDM 9502

TALENT DEVELOPMENT
RESEARCH-BASED DECISION MAKING SERIES

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Dr. Renzulli is a former President of The Association for the Gifted and is a member of the Board of Directors of The National Association for Gifted Children. He is a Fellow in the American Psychological Association and currently serves on the Education Boards of the *Gifted Child Quarterly*, *Learning Magazine*, *Gifted Child Monthly*, *The Journal of Law and Education*, and *Gifted Education International*. He has been a consultant to several school districts and agencies, including the Office of Gifted and Talented (U.S. Office of Education) and The White House Task Force on the Education of the Gifted and Talented.

Building a Bridge Between Gifted Education and Total School Improvement

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ABSTRACT

In this time of school restructuring, practitioners and others in the larger school community are seeking ways to improve the creative productivity and academic achievement of all students. The Schoolwide Enrichment Model (SEM) provides educators with an adaptable framework for bringing the lasting improvements to education that school personnel have sought for so long. This monograph describes three service delivery components (the Total Talent Portfolio, Curriculum Modification Techniques, Enrichment Learning and Teaching) and several organizational components of the Schoolwide Enrichment Model that can be used to provide high-level learning opportunities for all students.

Building a Bridge Between Gifted Education and Total School Improvement

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EXECUTIVE SUMMARY

As school improvement initiatives move from rhetoric to reality, teachers and administrators are eagerly looking for practical, cost-effective procedures for improving the quality of learning for *all* students. For the past nineteen years we have been developing, refining, and field testing a research supported model that is designed for general education, but is based on instructional methods and curricular practices that had their origins in special programs for high ability students. In many respects, special programs have been the true laboratories of our nation's schools. Their flexibility has presented ideal opportunities for testing new ideas and experimenting with potential solutions to long standing educational problems. Research in special programs has allowed the fine tuning of a model that emphasizes the need to provide a broad range of advanced-level enrichment experiences to all students and use the many and varied *student responses* to these experiences as stepping stones to relevant follow-up investigations on the parts of individuals and small groups.

This plan, entitled the Schoolwide Enrichment Model (SEM), provides a detailed blueprint for total school improvement that is flexible enough to allow each school to develop its own unique program based on local resources, student populations, school leadership dynamics, and faculty strengths and creativity. The goal of schoolwide enrichment is to promote high levels of challenging and satisfying learning across the full range of abilities, interests, and learning styles by incorporating enrichment learning and teaching practices into existing school structures and school improvement activities. It is not intended to replace or minimize existing services to high achieving students. The Schoolwide Enrichment Model provides educators with the means to:

- develop the talent potentials of young people by systematically assessing their strengths; create enrichment opportunities, resources, and services to develop the strengths; and use a flexible approach to curricular differentiation and the use of school time.
- improve the academic performance of all students in all areas of the regular curriculum and to blend standard curriculum activities with meaningful enrichment learning.
- promote continuous, reflective, growth-oriented professionalism of school personnel.
- create a learning community that honors ethnic, gender, and cultural diversity; mutual respect; democratic principles; and the preservation of the Earth's resources.
- implement a collaborative school culture that includes appropriate decision-making opportunities for students, parents, teachers, and administrators.

Talent: From Potential to Performance

A wide variety of research on human abilities (Bloom, 1985; Gardner, 1983; Renzulli, 1986; Sternberg, 1988) clearly justifies a broad conception of talent development.

Lay persons and professionals have begun to question the efficacy of programs that rely on narrow definitions and total reliance on IQ scores and other cognitive ability measures as the primary method for identifying which students can benefit from differentiated services. Continued support for the concept of talent development requires that we apply the know-how of gifted education to total school improvement and strive to include traditionally underrepresented groups of students whose potentials are manifested. Continued support also requires that enrichment opportunities, resources, and encouragement should be directly related to the behavioral characteristics that brought individual students to our attention in the first place. Special services should be viewed as opportunities to develop "gifted and talented performances" rather than merely finding and certifying them. In this regard, we should judiciously avoid labeling a young person as either "gifted" or "not gifted."

Where Are We Going With the Schoolwide Enrichment Model?

School improvement initiatives provide an excellent opportunity to integrate gifted program know-how into the mainstream of education. The adoption of many special program practices is indicative of the usefulness of both the know-how of our field and the role that specialists play in total school improvement. I have always maintained that *all* students should have opportunities to develop higher order thinking skills and to pursue more rigorous content than is typically found in today's "dumbed down" textbooks. I have also argued that we should be using the ways in which students *respond* to enriched learning experiences as a rationale for providing differentiated learning opportunities, resources, and encouragement. This reflects democratic ideals and accommodates the full range of individual differences in the entire student population. It also opens the door to programming models that will help us develop the talent potentials of many at-risk students who have traditionally been excluded from admission to special programs for the gifted. We must be willing to share this know-how and to develop ways of working within the context of the powerful school reform movement, or we will be excluded from the reform conversation, and the positions of specialists will continue to be eliminated.

The present reform initiatives have created an atmosphere in which there is a much greater receptivity for more flexible approaches, and accordingly, we have reconfigured the Schoolwide Enrichment Model to blend into the school improvement activities that are taking place throughout the country. The basic purpose of these new developments is twofold. First, we are attempting to provide schools with a systematic and flexible plan to implement and/or maintain commitments to the development of high levels of talent in young people. Second, we want to do everything possible to insure that there is a viable and exciting role within the school for specially trained persons who have strong backgrounds in enrichment learning and teaching. The reconfigured model enlarges the role of the Schoolwide Enrichment Team and further develops collaborative partnerships between SEM specialists, teachers, administrators, parents, and community members. We still believe that direct services in the form of high level follow-up and appropriate referrals to advanced resources and services are a "life line" for under challenged students with high potentials. For this reason, we continue to advocate enrichment specialist positions, as well as greater use of talent development techniques by the general faculty. The following sections describe some of the reconfigured features of the Schoolwide Enrichment Model.

The Total Talent Portfolio

Our approach to identification has expanded from one of labeling students to one of targeting behaviors that point up the need for high-level learning opportunities. Accordingly, we have developed procedures for examining the talent potentials of a broader

spectrum of the entire school population. To achieve this goal, we recommend the use of a document called the Total Talent Portfolio (TTP).

The Total Talent Portfolio is a vehicle for systematically gathering and recording information about a student's abilities, interests, and learning and expression style preferences. Unlike other school documents, the TTP is used to describe the very best things we know and can record about a student. Specifically, the Total Talent Portfolio is designed to assist teachers:

1. **Collect** several types of information that portray a student's strength areas and to regularly update this information.

2. **Classify** this information into the general categories of abilities, interests, learning and expression style preferences.

3. Periodically **review and analyze** the information for each student in order to identify an array of enrichment and acceleration experiences in the regular curriculum, the enrichment clusters, and the continuum of special services that will nurture the student's abilities and talents.

4. **Initiate** a shared decision making process among teachers, students, and parents regarding the most appropriate acceleration and enrichment learning opportunities.

5. **Communicate** with parents about the schools talent development opportunities and their son's or daughter's involvement with them.

6. **Synthesize** educational and personal information about each student to facilitate career counseling.

The data collected by teachers and the decisions and recommendations made jointly by teachers, parents and students are documented on the Total Talent Portfolio. The TTP contains five sections sequenced purposefully to move the practitioner from information gathering to program planning for each young person: status information, action information, student's goals and co-curricular activities, action plan and recommendations. The first section of the TTP concerns status information or the very best things we already know about a student, including academic strengths, interests, and learning and expression style preferences. The action information section provides space for practitioner to record new information we learn about a student, such as heightened motivation about a new topic. Student's goals and co-curricular activities complete the talent profile of the student, and a portion of the TTP provides space for this information. The last two sections of the TTP, action plan and recommendations, provide space for teachers, parents, and students to record the high-level learning options in which student engage and document plans for enrichment and acceleration in the next academic year.

Regular Curriculum Modification

The regular curriculum consists of anything and everything that is a part of the predetermined goals, schedules, learning outcomes, and delivery systems of the school. The regular curriculum might be traditional, innovative, or in the process of transition, but its predominant feature is that authoritative forces (i.e., policy makers, school councils, textbook adoption committees, state regulators) have determined that it should be the "centerpiece" of student learning. Our efforts to influence the regular curriculum fall into three categories. First, the challenge level of required material should be differentiated

through processes such as curriculum compacting, textbook content modification procedures, and cluster grouping. Second, systematic procedures should be used to replace eliminated content with carefully selected, in-depth learning experiences. Third, the types of enrichment recommended in the Enrichment Triad Model (Renzulli, 1977) should be selectively integrated into regular curriculum. It is conceivable that the application of certain SEM components and related staff development activities might eventually result in substantial changes in both the content and instructional processes of the regular curriculum.

The Enrichment Clusters

Enrichment clusters are non-graded groups of students who come together during specially designated time blocks to pursue common interests. Clusters are organized around major disciplines, interdisciplinary themes, or cross-disciplinary topics (e.g., a theatrical/television production group that includes actors, writers, technical specialists, and costume designers). Like co-curricular activities and programs such as 4-H and Junior Achievement, the main rationale for participation in one or more clusters is that students and teachers want to be there. Community resource persons should also be invited to participate. Interest assessment procedures, examples of previous positive involvement in curricular or non-school activities, and highly positive reactions to purposefully selected interest development activities, are used to help young people and adults make decisions about which enrichment cluster(s) will provide them with challenging and worthwhile learning experiences. The model for learning used within enrichment clusters is based on an inductive approach to the pursuit of real-world problems rather than traditional, didactic modes of teaching. This approach, entitled enrichment learning and teaching, is purposefully designed to create a learning environment that places a premium on the development of higher order thinking skills and the authentic application of these skills in creative and productive situations. It places students into the roles of young practicing professionals within their field of interest. The theory underlying this approach is based on the work constructivist theorists such as Jean Piaget and Jerome Bruner, and applications of constructivist theory in classroom practice (e.g., Atkin & Karplus, 1962; Lampert, 1984; Lawson, 1978; Linn, Chen, & Thier, 1977). Enrichment clusters are excellent vehicles for promoting cooperativeness within the context of real-world problem solving, and they also provide superlative opportunities for promoting positive self-concepts. The major assumption underlying the use of enrichment clusters is that *every child is special if we create conditions in which he/she can be a specialist within a specialty group.*

Enrichment clusters are not intended to be the total program for talent development in a school, but they are a major vehicle for stimulating interests and developing talent potentials across the entire school population. They are also vehicles for staff development in that they provide teachers with the opportunity to participate in enrichment teaching, and subsequently to analyze and compare this type of teaching with traditional methods of instruction. In this regard the model promotes a spill-over effect by encouraging teachers to become better talent scouts and to apply enrichment techniques to regular classroom situations. The use of enrichment clusters is the only major structural change in school organization that this model requires.

The Continuum of Special Services

The Schoolwide Enrichment Model is based on providing a broad range of services. Although the enrichment clusters and modifications of the regular curriculum provide a broad range of services to meet individual needs, a program for *total talent development* still requires supplementary services that challenge young people who are capable of working at the highest levels. These services, which cannot ordinarily be

provided in enrichment clusters or the regular curriculum, typically include: individual or small group counseling, direct assistance in facilitating advanced-level work, arranging for mentorships, and making connections between students and community persons, resources, and agencies. Direct assistance involves setting up and promoting student, faculty, and parental involvement in special programs such as Future Problem Solving; Odyssey of the Mind; Model United Nations; and state and national essay, mathematics, and history contests. Special services may also include individual student participation in summer programs, on-campus courses, special schools, theatrical groups, scientific expeditions, or apprenticeships consisting of advanced-level learning opportunities. Provision of these services is one of the responsibilities of the schoolwide enrichment teaching specialist and the enrichment team.

An Invitation to Get Involved!

One of the most important things we have done to help people share the rapidly growing know-how about practical ways to implement SEM is to create a network and electronic bulletin board. The Schoolwide Enrichment Model Network (SEMNET) is an international network which provides educators with the opportunity to exchange their SEM experiences and collaborate with other network members. Through this network, educators can gather information concerning effective teaching and learning strategies, useful instructional materials, and available professional development resources. The network provides a cost-effective and time-saving method for obtaining and disseminating large amounts of curricular materials, planning guides, and the practical know-how that has evolved from the developmental work on the Schoolwide Enrichment Model.[1]

In the past nineteen years we have learned a great deal about enrichment learning and teaching. We consider this model to be a gentle and evolutionary approach to school improvement that is well suited to the current environment for educational change. The time has come for a broader application of the strategies and techniques that have served us well in special programs, and I invite you to join us in this new effort to make all schools laboratories for talent development. I also hope that you will share these thoughts with your school and district leaders so that they will consider supporting your efforts to promote superlative learning in all students.

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[1]Persons interested in learning more about how they can join this network should write to:
SEMNET, Holiday Mall, 1733 Storrs Road, Storrs, CT 06268
(203) 429-1653 FAX (203) 429-7783

Most Frequently Asked Questions About Schools for Talent Development[2]

1. What about our existing Talent Pool? Should we continue to identify our gifted students?

The need to maintain traditional practices with respect to identification is a *local decision*. Our experience with SEM indicates that some districts are ready to move to a more inclusive approach with respect to high-end learning opportunities and have allocated funds on a per-pupil basis to provide these learning activities. Other districts, where mandates exist to identify and provide services to their high achieving students, continue to identify students in the traditional fashion. Regardless of the position of the district with respect to identification, high-end learning opportunities *can be blended into* the traditional curriculum for all students. District teams are encouraged to begin implementing Schoolwide Enrichment Model (SEM) using component(s), e.g., Total Talent Portfolios, enrichment clusters, curriculum compacting, that are most compatible with existing school structures and are most defensible.

2. Do we really need an enrichment specialist?

Absolutely. The services of an enrichment specialist are essential as districts move towards a talent development model. Enrichment specialists will find themselves providing not only face-to-face activities to students, but also resource and leadership services. Face-to-face activities include small group teaching and mentoring, direct coaching and supervision of enrichment projects, and coordinating mentorships with faculty or community resource persons. Leadership responsibilities include, for example, peer coaching and staff development, work with enrichment teams, public relations, program evaluation and monitoring, reviewing curriculum materials, and communications, such as newsletters and administrative updates. The job of the enrichment specialist will remain a critical one until the time that high-end learning opportunities are available to all students in order to maximize individual potential.

3. Isn't this new plan for school improvement really watering down our present services to the detriment of our high ability students?

Absolutely not. This model for talent development retains all high-end learning opportunities. These opportunities, such as curriculum compacting, and enrichment activities continue to be provided to traditionally identified students. This model extends high-end learning to all students so that they have an opportunity to benefit from the know-how that has been developed by those in gifted education over the past years.

Our experience suggests that parents of traditionally identified students can be reluctant to adopt the philosophy of SEM and its new components. Clearly, they are concerned that their child will no longer receive the critical services of the past. Accordingly, it is especially important to assure these parents that their child's strengths will continue to be addressed through curriculum compacting, interest development activities, group skill training, and opportunities for self-selected independent investigations of real world problems.

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[2] Developed by Jeanne H. Purcell and Joseph S. Renzulli.

4. Why do we have to have pull-out clusters? Can't these activities take place in the regular classroom, thereby reducing the disruption to the schedule?

Enrichment clusters are non-graded groups of students who come together because they share a common interest. The reason for the existence of the clusters is to provide an opportunity for students from *different classes and grades* to share their passion for a subject. To restrict the cluster concept to students from one classroom denies participants the opportunity to build upon the passion of students from other classes and grades who share the same interest.

5. I do not believe that all members of my faculty will want to be involved with the clusters because it will mean a restructuring of their school day. What do we do when some teachers do not want to be involved?

Three different initiatives can be used in this situation. First, clusters may be started by only those who are sincerely interested in the concept. Specifically, clusters can be initiated by those in a department, in one grade level, or in one school. Word about the success of the initiative will spread and help to convince other professionals of its value. Second, administrative support may be an alternative. The extent of administrative support depends upon the degree of administrative involvement at the time SEM was adopted by the district. If administrators were involved in the adoption process and ownership of the program exists, administrative encouragement and support may be the key to convincing reluctant teachers to become involved with enrichment clusters. The third initiative involves the substitution of a professional who is enthusiastic about implementing enrichment clusters for one who maybe reluctant. Clearly, this initiative works only in those districts where the cluster concept is being implemented on a small scale–that is, in one grade or one department–and opportunities exist for substitution.

6. What about the students who never want to participate in anything because they lack interest? Do I force children to be involved with an enrichment cluster?

Students should not be forced into participating in a cluster, and the proper "front-end" work on the part of practitioners will minimize the likelihood of large numbers of reluctant students. Most important, clusters should be constructed *after* students' interests have been assessed. Our experience with preliminary interest assessment indicates that most students' interest can be accommodated in the initial set of cluster offerings. If, by chance, a student's interest area cannot be honored in the first set, special efforts need to be made to honor this student's interests in the second set of cluster offerings provided at a later date.

7. Won't the enrichment cluster format "water down" these services for highly able students because the group will be so heterogeneous and multi-aged?

Rather that "water down" services for high achieving students, we believe that enrichment clusters provide additional opportunities for high-end learning activities. Most important, the passion that enrichment cluster participants share escalates the level of the learning activity. Second, learning opportunities are heightened because students have the opportunity to become first-hand inquirers; they will be constructing knowledge as they produce a product or provide a service. Finally, it is important to note that participants will self-select themselves into clusters within the cluster. For example, students who decide to

produce a school newspaper will quickly become reporters, editors, or photographers. It is the opportunity to become the expert within a cluster that provides additional high-end learning opportunities.

8. It seems to me that scheduling enrichment clusters into the secondary schedule will be a much more difficult task than scheduling them into the elementary schedule. We have so many students who are taking Advanced Placement and University Credit Programs. How do we accommodate this new component into the already full secondary schedule?

Albert Einstein once said that "All that is valuable in society depends upon the opportunity for development accorded an individual." We need to look at the spectrum of opportunities we provide for students as we seek to encourage and develop their talents. Advanced Placement and University Credit Programs are viable opportunities for talent development for those students who need accelerated programs. We must realize, however, that acceleration is only *one* option for talent development. Students also need opportunities to broaden or enrich their talents in self-selected areas. Additionally, they need opportunities be become producers of knowledge.

With respect to the time issue, we simply have to become more creative with the ways we utilize school time. Recent articles and books document different plans and techniques for finding time within the existing school schedule for teachers to collaborate and provide student programs. Examples include:

Carroll, J. M. (1989). *The Copernican Plan: Restructuring the American high school.* Andover, MA: The Regional Laboratory for Educational Improvement of the Northeast and the Islands.

Donahoe, T. (1993). Finding the way: Structure, time and culture in school improvement. *Phi Delta Kappan, 75*(4), 298-305.

Raywid, M. A. (1993). Finding time for collaboration. *Educational Leadership, 51*(1), 30-34.

9. In what ways do the enrichment clusters address the needs of high ability children?

Enrichment clusters provide high-achieving students with the opportunity to (1) participate in learning activities in area an of their interest, (2) share their passion with other students and adults who have common interests, (3) pursue that interest to a depth and at a pace commensurate with their abilities, (4) select a product or service related to the area of interest, and (5) become a first-hand inquirer. Essentially, clusters differentiate learning by content, process, product, and environment.

10. How do we group children in the clusters? We can't possibly have students, K-6, together, can we?

We believe that students of diverse ages can be grouped together in a cluster. The determining factor is not the *age* of the students, but the *nature* of the cluster. For example, students of any age can play key roles in The Young Playwright's Guild, The Young Entomologist's Society, or The Creative Furniture Design Company.

11. I am the school newspaper advisor. We meet before school and after school once or twice a week, My club already acts like an enrichment cluster. Why can't we just form more clubs, meet before and after school and not disrupt the regular schedule?

We certainly encourage the continuation of existing clubs and other similar activities because they have served as de facto enrichment clusters. We believe that enrichment clusters must also become regular school structures that operate during the school day if we are to make significant progress toward developing the talent potential of all students. If clusters meet only after school, (1) they will always be perceived as an extra rather than an integral part of the educational process, and (2) some students will be prohibited from attending.

To summarize, clubs and other after school activities must continue. Additionally, enrichment clusters must be added into the regular school day to serve the interests of all students, and those students who are involved in after-school jobs are other similar commitments.

12. In order to run these clusters, teachers will have to devote an incredible amount of time to organizing and collecting resources. What about teachers who go along with the concept, but just aren't willing to put in the time and energy to facilitate products that children can be proud of?

The quality of products will depend, in large part, on the motivation of the facilitator in the cluster. Accordingly, those in charge of implementing clusters must do all they can to promote the motivation of those in facilitating positions. Several strategies can be used to insure the success of facilitators. First, it is important to match carefully teachers and community members with clusters that reflect their interest. Second, tentative facilitators can be teamed with a parent volunteer or mentor in the selected area. Finally, evaluations of the clusters need to be conducted. Students and facilitators need the opportunity to review their work, recognize their accomplishments, and be provided with specific ways and encouragement to improve upon past performances.

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Glossary

Continuum of Special Services—This continuum reflects the high-level learning options offered to all students in a school district. Examples of high-level learning opportunities include, for example: enrichment clusters, curriculum compacting, other curriculum modification techniques, flexible grouping options, mentorships, and special programs, such as Future Problem Solving, Community Problem Solving, Model United Nations, and history and essay contests.

Curriculum Compacting—A systematic procedure for modifying or streamlining the regular curriculum in order to eliminate previously mastered material

Enrichment Clusters—Non-graded groups of students who come together during specified blocks of time during the school day to pursue common interests

Enrichment Learning and Teaching—A series of four concepts or principles which are cornerstones of the SEM model. These principles include:

1. Each learner is unique and, therefore, all learning experiences must be examined for ways that take into account the abilities, interests, and learning styles of the individual.
2. Learning is more effective when students enjoy what they are doing.
3. Learning is more meaningful and enjoyable when content (knowledge) and process (thinking skills, methods of inquiry) are learned within the context of real problems.
4. Students' constructions of meaning are as important as teachers' instructions.

Enrichment Triad Model—An instructional pattern for delivering enrichment learning and teaching. It consists of three types of enrichment activities: general exploratory activities (Type I), which are investigations for students to pursue topics in-depth; group training activities (Type II), which consist of methods, materials, and instructional techniques to develop students' higher level thinking processes; and students' self-selected, real-world investigations of selected topics (Type III).

Organizational Components—Materials, resources, and processes which support the direct services to students

Regular Curriculum—Consists of anything and everything that is part of the predetermined goals, schedules, learning outcomes, and delivery systems of the school

School Structures—Settings where learning takes place

Schoolwide Enrichment Model Network—An international electronic network which provides practitioners with opportunities to (1) search data bases for information about enrichment resources, completed Type III investigations, and student fairs, competitions, and contests, and (2) collaborate with other educators regarding their experiences and ongoing work with SEM.

Service Delivery Components—Direct services to students

Total Talent Portfolio—A vehicle for systematically recording and acting upon the strengths and talents of students

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Building a Bridge Between Gifted Education and Total School Improvement

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Two afternoons a week, 12 year old Kelvin goes to an enrichment cluster at the Noah Webster School in Hartford, Connecticut. When he was selected for the program, Kelvin said, "It feels good, but I was amazed. I was about to faint! I was super, super surprised." Kelvin was amazed because he never considered himself a good student, at least not in the traditional way we usually view students.

Those who coordinate Kevin's program look at talent development in a different way. Based on a plan called the Schoolwide Enrichment Model, the program seeks to identify a broad range of talent potentials in all students through the use of a strength assessment guide called the Total Talent Portfolio. This guide helps to focus attention on student interests and learning style preferences as well as strengths in traditional subjects. These strengths serve as building blocks for advanced achievement. Kelvin's strongest academic area is mathematics, and through a process called curriculum compacting, teachers are now providing Kevin with mathematics material that is two grade levels above the level of math being covered in his classroom.

Kelvin, who once described himself as a "mental dropout," now finds school a more inviting place. He hopes to enter the research he is doing on airplane wing design in his enrichment cluster into a state science fair competition. He is also thinking about a career in engineering, and the enrichment specialist at his school has helped him apply for a special summer program at the University of Connecticut that is designed to recruit and assist minorities into mathematical and engineering related professions. "School," says Kelvin, "is a place where you have must-dos and can-dos. I work harder on my must-dos so I can spend more time working on my can-dos."

The Secret Laboratory of School Improvement

Kelvin represents one example of the ways in which numerous students are being given opportunities to develop talent potentials that many schools have ignored for too many years. The type of program in which Kelvin is enrolled is not a radical departure from present school structures, but it is based on assumptions about learners and learning that are different from those that have guided public education for many years. This quote by Albert Einstein, "problems cannot be solved at the same level of consciousness that created them," contains words of wisdom that we must consider if there is any hope of turning around a public education system that is slowly but surely deteriorating into a massive warehouse of underachievement, unfulfilled expectations, and broken dreams. The factory model of schooling that gave rise to the clear and present danger facing our schools cannot be used to overcome the very problems that this model of schooling has created. And yet, as we examine reform initiatives, we find it hard to find plans and policies that are qualitatively different from the old top-down patterns of school organization or the traditional linear/sequential models of learning that have dominated almost all of the curriculum used in our schools. Transcending these previous levels of consciousness will not be an easy task. If there is any single, unifying characteristic of present day schools, that characteristic is surely a resistance, if not an immunity, to change.

The ponderous rhetoric about school improvement and the endless lists of noble goals need to be tempered with a gentle and evolutionary approach to change that school personnel can live and grow with rather than be threatened by. If the traditional methods of schooling have failed to bring about substantial changes, we must look at different models that show promise of achieving the types of school improvement we have so desperately sought.

This paper describes a plan that has demonstrated its effectiveness in bringing about significant changes in schooling. The plan, entitled the Schoolwide Enrichment Model (SEM), is a systematic set of specific strategies for increasing student effort, enjoyment, and performance, and for integrating a broad range of advanced-level learning experiences and higher order thinking skills into any curricular area, course of study, or pattern of school organization. The general approach of the SEM is one of infusing more effective practices into existing school structures rather than layering on additional things for schools to do. This research supported plan is designed for general education, but it is based on a large number of instructional methods and curricular practices that had their origins in special programs for high ability students.

In many respects, special programs of almost any type have been the true laboratories of our nation's schools because they have presented ideal opportunities for testing new ideas and experimenting with potential solutions to long standing educational problems. Programs for high potential students have been an especially fertile place for experimentation because such programs usually are not encumbered by prescribed curriculum guides or traditional methods of instruction. It was within the context of these programs that the thinking skills movement first took hold in American education, and the pioneering work of notable theorists such as Benjamin Bloom, Howard Gardner, and Robert Sternberg first gained the attention of the education community. Other developments that had their origins in special programs are currently being examined for general practice. These developments include: a focus on concept rather than skill learning, the use of interdisciplinary curriculum and theme-based studies, student portfolios, performance assessment, cross-grade grouping, alternative scheduling patterns, and perhaps most important, opportunities for students to exchange traditional roles as lesson-learners and doers-of-exercises for more challenging and demanding roles that require hands-on learning, first-hand investigations, and the *application* of knowledge and thinking skills to complex problems.

Research opportunities in a variety of special programs allowed us to develop instructional procedures and programming alternatives that emphasize the need (1) to provide a broad range of advanced-level enrichment experiences for *all* students, and (2) to use the many and varied ways that students respond to these experiences as stepping stones for relevant follow-up on the parts of individuals or small groups. This approach is not viewed as a new way to identify who is or is not "gifted!" Rather, the process simply identifies how subsequent *opportunities, resources, and encouragement* can be provided to support continuous escalations of student involvement in both required and self-selected activities. This approach to the development of high levels of multiple potentials in young people is purposefully designed to sidestep the traditional practice of labeling some students "gifted" (and by implication, relegating all others to the category of not-gifted). The term, "gifted," is used in our lexicon only as an adjective, and even then, it is used in a developmental perspective. Thus, for example, we speak and write about *the development of gifted behaviors* in specific areas of learning and human expression rather than giftedness as a state of being. This orientation has allowed many students opportunities to develop high levels of creative and productive accomplishments that otherwise would have been denied through traditional special program models.

Practices that have been a mainstay of many special programs for students with high ability are being absorbed into general education by reform models designed to upgrade the performance of all students. This integration of gifted program know-how is viewed as a favorable development for two reasons. First, the adoption of many special program practices is indicative of the viability and usefulness of both the know-how of special programs and the role enrichment specialists can and should play in total school improvement. It is no secret that compensatory education in the U.S. has largely been a failure! An overemphasis on remedial and mastery models has lowered the challenge level of the very population that programs such as Chapter I attempts to serve. Second, *all* students should have opportunities to develop higher order thinking skills and to pursue more rigorous content and first-hand investigative activities than those typically found in today's "dumbed down" textbooks. The ways in which students respond to enriched learning experiences should be used as a rationale for providing all students with advanced-level follow-up opportunities. This approach reflects a democratic ideal that accommodates the full range of individual differences in the entire student population, and it opens the door to programming models that develop the talent potentials of many at-risk students who traditionally have been excluded from anything but the most basic types of curricular experiences. But in order to operationalize this ideal, we need to "get serious" about the things we have learned during the past several years about both programming models and human potential.

The application of gifted program know-how into general education is supported by a wide variety of research on human abilities (Bloom, 1985; Gardner, 1983; Renzulli, 1986; Sternberg, 1984). This research clearly and unequivocally provides a justification for much broader conceptions of talent development. These conceptions argue against the restrictive student selection practices that guided identification procedures in the past. Lay persons and professionals at all levels have begun to question the efficacy of programs that rely on narrow definitions, IQ scores, and other cognitive ability measures as the primary method for identifying which students can benefit from differentiated services. Traditional identification procedures have restricted services to small numbers of high scoring students and excluded large numbers of at-risk students whose potentials are manifested in other ways that will be described in a later section that describes an SEM component called the Total Talent Portfolio. Special services should be viewed as opportunities to develop "gifted behaviors" rather than merely finding and certifying them. In this regard, we should judiciously avoid saying that a young person is either "gifted" or "not gifted." It is difficult to gain support for talent development when we use as a rationale statements such as "Elaine is a gifted third grader." These kinds of statements offend many people and raise the accusations of elitism that have plagued special programs. But note the difference in orientation when we focus on the behavioral characteristics that brought this student to our attention in the first place: "Elaine is a third grader who reads at the adult level and who has a fascination for biographies about women of scientific accomplishment." And note the logical and justifiable services provided for Elaine:

1. Under the guidance of her classroom teacher, Elaine was allowed to substitute more challenging books in her interest area for the third grade reader. The schoolwide enrichment teaching specialist helped the classroom teacher locate these books, and they were purchased with funds from the enrichment program budget.
2. Elaine was allowed to leave the school two afternoons a month (usually on early dismissal days) to meet with a mentor who is a local journalist specializing in gender issues. The schoolwide enrichment teaching specialist arranged transportation with the help of the school's parent volunteer group.

3. During time made available through curriculum compacting in her strength areas (i.e., reading, language arts, and spelling), the schoolwide enrichment teaching specialist helped Elaine prepare a questionnaire and interview schedule to be used with local women scientists and female science faculty members at a nearby university.

Could even the staunchest anti-gifted proponent argue against the logic or the appropriateness of these services? When programs focus on developing the behavioral potential of individuals, or small groups who share a common interest, it is no longer necessary to organize groups merely because they all happen to be "gifted third graders."

The Schoolwide Enrichment Model

The programming model that we have advocated since the early 1970s has always argued for a behavioral definition of giftedness and a greater emphasis on applying gifted program know-how to larger segments of the school population. School districts across the country are using the model and many districts major urban areas, such as New York City, Detroit, St. Paul, San Antonio, and Fort Worth. The present reform initiatives in general education have created a more receptive atmosphere for more flexible approaches that challenge all students, and accordingly, we have organized the Schoolwide Enrichment Model (SEM) so that it blends into school improvement activities that are currently taking place throughout the country. Space does not permit a detailed description of the full model; however, the following sections will describe the school structures upon which the model is targeted and the three service delivery components. A graphic representation of the model is presented in Figure 1.

School Structures

The Regular Curriculum

The regular curriculum consists of everything that is a part of the predetermined goals, schedules, learning outcomes, and delivery systems of the school. The regular curriculum might be traditional, innovative, or in the process of transition, but its predominant feature is that authoritative forces (i.e., policy makers, school councils, textbook adoption committees, state regulators) have determined that the regular curriculum should be the "centerpiece" of student learning. Application of the SEM influences the regular curriculum in three ways. First, the challenge level of required material is differentiated through processes such as curriculum compacting, textbook content modification procedures, and group jumping strategies. Second, the systematic content intensification procedures used to replace eliminated content with selected, in-depth learning experiences increases the challenge level by introducing the broad underlying principles of a discipline. Third, types of enrichment recommended in the Enrichment Triad Model (described below) are integrated selectively into regular curriculum activities. Although our goal in the SEM is to influence rather than replace the regular curriculum, application of certain SEM components and related staff development activities have resulted in substantial changes in both the content and instructional processes of the entire regular curriculum.

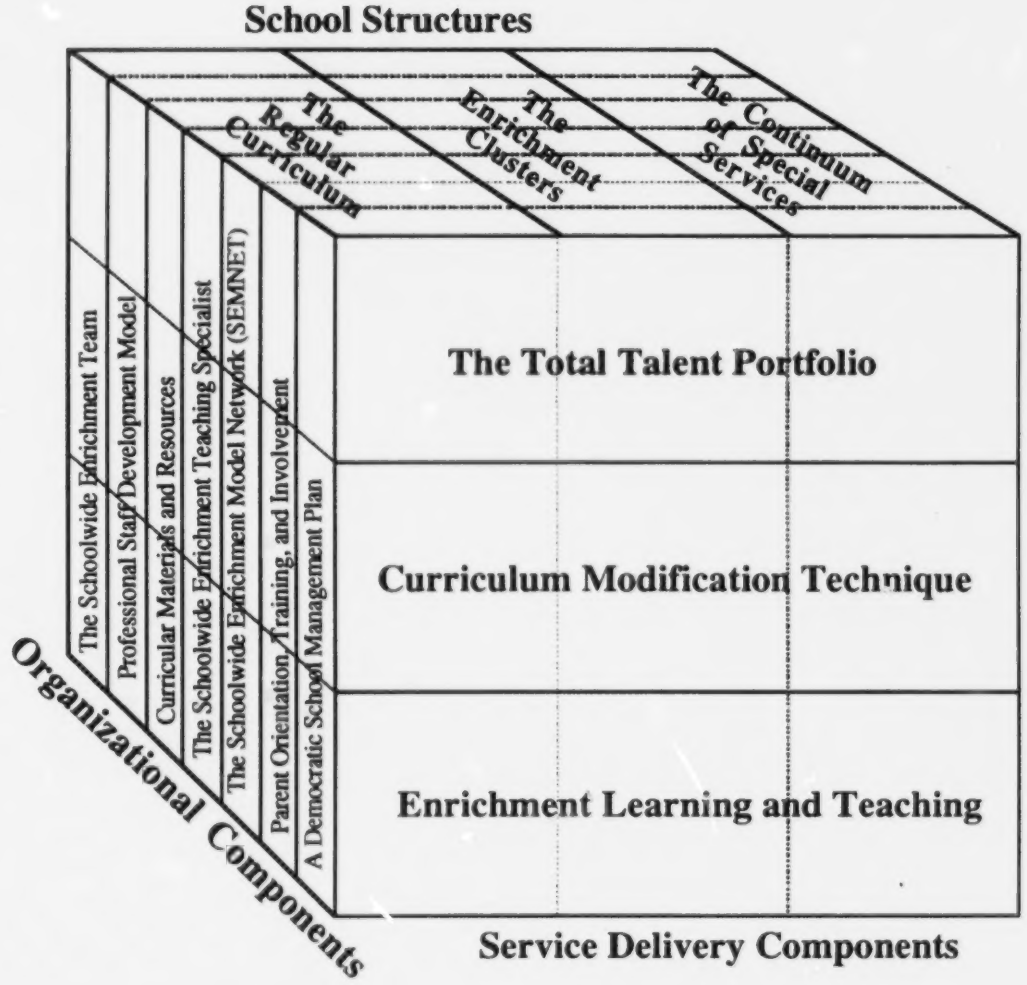

Figure 1. The Schoolwide Enrichment Model: Relationship between two types of components of the model and school structure.

The Enrichment Clusters

The enrichment clusters are non-graded groups of students who share common interests, and who come together during specially designated time blocks to pursue these interests. Like co-curricular activities and programs such as 4-H and Junior Achievement, the main rationale for participation in one or more clusters is that *students and teachers want to be there*. All teachers (including music, art, physical education, etc.) are involved in teaching the clusters; and teacher involvement in any particular cluster is based on the same type of interest assessment used for students. Community resource persons should also be invited to organize enrichment clusters. The model for learning used with enrichment clusters is based on an inductive approach to the pursuit of real-world problems rather than traditional, didactic modes of teaching. This approach, entitled enrichment learning and teaching, is purposefully designed to create a learning environment that places a premium

on the development of higher order thinking skills and the authentic application of these skills in creative and productive situations. The theory underlying this approach is based on the work of constructivist theorists such as Jean Piaget, Jerome Bruner, and John Dewey, and applications of constructivist theory to classroom practice. Enrichment clusters are excellent vehicles for promoting cooperativeness within the context of real-world problem solving, and they also provide superlative opportunities for promoting positive self-concepts. A major assumption underlying the use of enrichment clusters is that *every child is special if we create conditions in which that child can be a specialist within a specialty group.*

Enrichment clusters are organized around major disciplines, interdisciplinary themes, or cross-disciplinary topics (e.g., an electronic music group or a theatrical/television production group that includes actors, writers, technical specialists, costume designers). The clusters are modeled after the ways in which knowledge utilization, thinking skills, and interpersonal relations take place in the real world. Thus, all work is directed toward the production of a product or service. There are no lesson plans or unit plans. Rather, direction is provided by the following key questions:

1. What do people with an interest in this area do?
2. What products or services do they provide?
   a. What are the different roles that are necessary to produce the product or service?
   b. What are the methods and resources used by professionals to produce high-quality products?
3. How, and with whom, do they communicate the results of their work?
4. Who are the people in our community interested in the product or service we will produce/provide?
5. What steps need to be taken to insure that our product or service will have an impact on our audience?

The enrichment clusters are not intended to be the total program for talent development in a school, but they are a major vehicle for stimulating interests and developing talent potentials across the entire school population. They are also vehicles for staff development in that they provide teachers an opportunity to participate in enrichment teaching, and subsequently to analyze and compare this type of teaching with traditional methods of instruction. In this regard the model promotes a spill-over effect by encouraging teachers to become better talent scouts and talent developers, and to apply enrichment techniques to regular classroom situations. Enrichment clusters are used by some schools on a one-half a day per week basis, and in other schools they meet daily. At the Webster Elementary School in St. Paul, Minnesota, for example, a broad array of interdisciplinary clusters are offered daily. At the Southeast School in Mansfield, Connecticut, enrichment clusters are offered two afternoons a month, and they are taught jointly by teachers, administrators, and parent volunteers. One of the most popular clusters is called "Flight School," and was organized by the superintendent of schools who is a licensed pilot.

The Continuum of Special Services

A broad range of special services is the third school structure that is targeted by the model. A diagram representing these services is presented in Figure 2. Although the enrichment clusters and the SEM-based modifications of the regular curriculum provide a broad range of services to meet individual needs, a program for total talent development still requires supplementary services that challenge young people who are capable of working at the highest levels of their special interest areas. These services, which cannot ordinarily be provided in enrichment clusters or the regular curriculum, typically include: individual or small group counseling, direct assistance in facilitating advanced-level work, arranging for mentorships with faculty members or community persons, and making other types of connections between students, their families, and out-of-school persons, resources, and agencies. For example, the schoolwide enrichment coordinator in the LaPorte, Indiana School Corporation developed a Parent-Teacher Enrichment Guide of the city and surrounding area that includes information about a wide variety of enrichment opportunities for parents and teachers.

Direct assistance also involves setting up and promoting student, faculty, and parental involvement in special programs such as Future Problem Solving, Odyssey of the Mind, the Model United Nations program, and state and national essay, mathematics, and history contests. Another type of direct assistance consists of arranging out-of-school involvement for individual students in summer programs, on-campus courses, special schools, theatrical groups, scientific expeditions, and apprenticeships at places where advanced-level learning opportunities are available. Provision of these services is one of the responsibilities of the schoolwide enrichment teaching specialist or an enrichment team of teachers and parents who work together to provide options for advanced learning. A schoolwide enrichment teaching specialist in Barrington, Rhode Island estimates she spends two days a week in a resource capacity to the faculties of two schools, and three days providing direct services to students.

Service Delivery Components

The Total Talent Portfolio

The case study of Elaine presented earlier is an example of the ways in which the Schoolwide Enrichment Model targets specific learning characteristics that can serve as a basis for talent development. Our approach to targeting learning characteristics uses both traditional and performance-based assessment to compile information about three dimensions of the learner—abilities, interests, and learning styles. This information, which focuses on strengths rather than deficits, is compiled in a folder called the Total Talent Portfolio (see Figure 3), and it is used to make decisions about talent development opportunities in regular classes, enrichment clusters, and in the continuum of special services. Two questions summarize the intent of the Total Talent Portfolio: What are the very best things we know and can record about a student's best work, and what are the best ways we can utilize the information to nurture the student's talent? This expanded approach to identifying talent potentials is essential if we are to make genuine efforts to include more underrepresented students in a plan for *total* talent development. This approach is also consistent with the more flexible conception of *developing* gifts and talents that has been a cornerstone of our work and our concerns for promoting more equity in special programs.

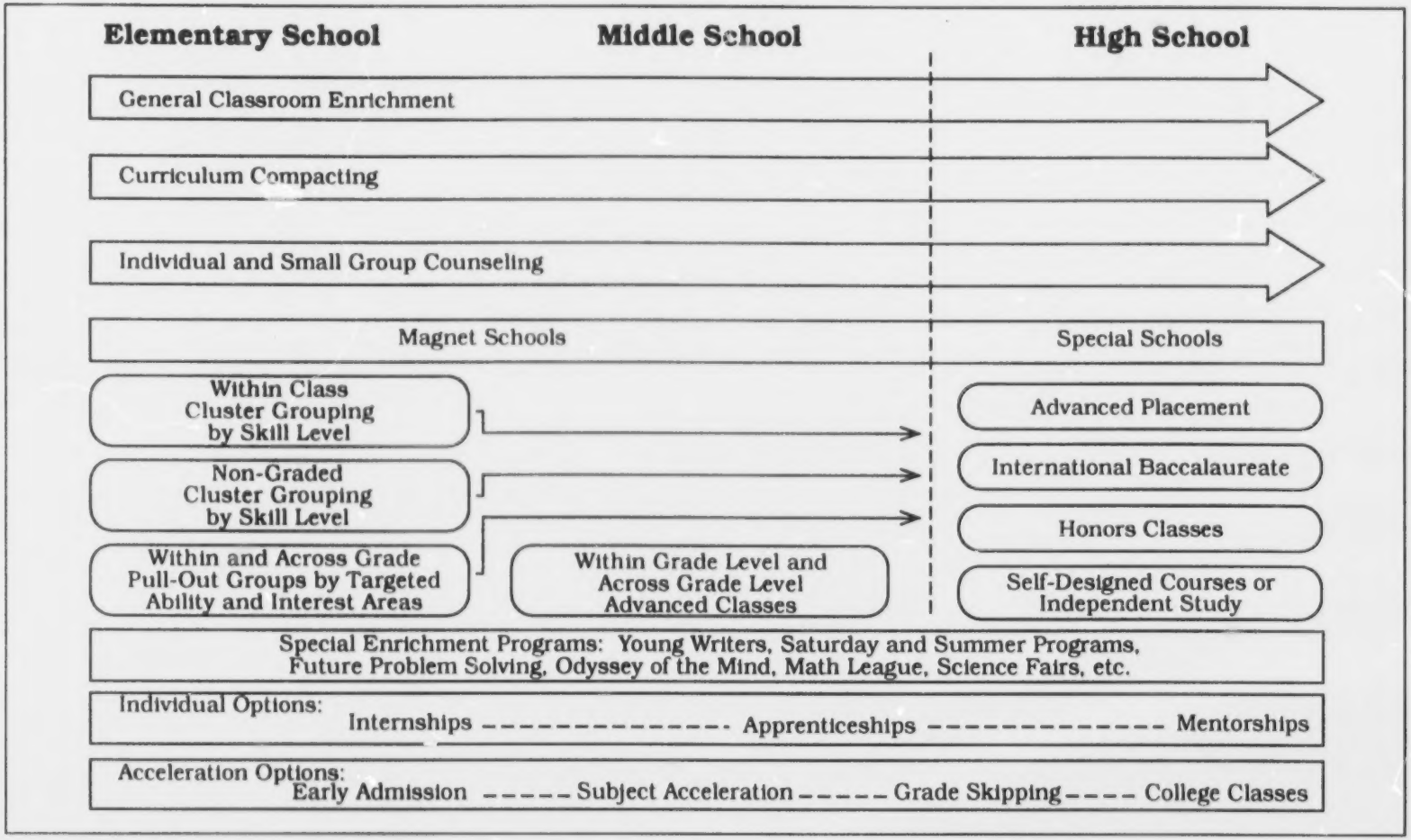
Elementary School
Middle School
High School
General Classroom Enrichment
Curriculum Compacting
Individual and Small Group Counseling
Magnet Schools
Special Schools
Within Class Cluster Grouping by Skill Level
Non-Graded Cluster Grouping by Skill Level
Within and Across Grade Pull-Out Groups by Targeted Ability and Interest Areas
Within Grade Level and Across Grade Level Advanced Classes
Advanced Placement
International Baccalaureate
Honors Classes
Self-Designed Courses or Independent Study
Special Enrichment Programs: Young Writers, Saturday and Summer Programs, Future Problem Solving, Odyssey of the Mind, Math League, Science Fairs, etc.
Individual Options:
Internships ---------- Apprenticeships ---------- Mentorships
Acceleration Options:
Early Admission ----- Subject Acceleration ----- Grade Skipping ---- College Classes

Figure 2. The continuum of special services.

Abilities	*Interests*	*Style Preferences*			
Maximum Performance Indicators	***Interest Areas***	***Instructional Styles Preferences***	***Learning Environment Preferences***	***Thinking Styles Preferences***	***Expression Style Preferences***
Tests •Standardized •Teacher-Made Course Grades Teacher Ratings **Product Evaluation** •Written •Oral •Visual •Musical •Constructed (Note differences between assigned and self-selected products) Level of Participation in Learning Activities Degree of Interaction With Others Ref: General Tests and Measurements Literature	Fine Arts Crafts Literary Historical Mathematical/Logical Physical Sciences Life Sciences Political/Judicial Athletic/Recreation Marketing/Business Drama/Dance Musical Performance Musical Composition Managerial/Business Photography Film/Video Computers Other (Specify) Ref: Renzulli, 1977b	Recitation & Drill Peer Tutoring Lecture Lecture/Discussion Discussion Guided Independent Study * Learning /Interest Center Simulation, Role Playing, Dramatization, Guided Fantasy Learning Games Replicative Reports or Projects* Investigative Reports or Projects* Unguided Independent Study* Internship* Apprenticeship* *With or without a mentor Ref: Renzulli & Smith, 1978	***Inter/Intra Personal*** •Self-Oriented •Peer-Oriented •Adult-Oriented •Combined ***Physical*** •Sound •Heat •Light •Design •Mobility •Time of Day •Food Intake •Seating Ref: Amabile, 1983; Dunn, Dunn, & Price, 1975; Gardner, 1983	Analytic (School Smart) Synthetic/ Creative (Creative, Inventive) Practical/ Contextual (Street Smart) Legislative Executive Judicial Ref: Sternberg, 1984, 1988	Written Oral Manipulative Discussion Display Dramatization Artistic Graphic Commercial Service Ref: Renzulli & Reis, 1985

Figure 3. Dimensions of the Total Talent Portfolio.

Curriculum Modification Techniques

The second service delivery component of the SEM is a series of curriculum modification techniques that are designed to: (1) adjust levels of required learning so that all students are challenged, (2) increase the number of in-depth learning experiences, and (3) introduce various types of enrichment into regular curricular experiences. The procedures used to carry out curriculum modification are curriculum compacting, textbook analysis and surgical removal of repetitious material from textbooks, and a planned approach for introducing greater depth into regular curricular material.

Curriculum compacting (Reis & Renzulli, 1992) is a systematic procedure for modifying or streamlining the regular curriculum in order to eliminate repetition of previously mastered material, upgrading the challenge level of the regular curriculum, and providing time for appropriate enrichment and/or acceleration activities. This process includes: (1) defining the goals and outcomes of a particular unit or segment of instruction, (2) determining and documenting which students have already mastered most or all of a specified set of learning outcomes, or who are capable of mastering them in less time than their peers, and (3) providing replacement activities for material already mastered through the use of instructional options that enable a more challenging and productive use of the student's time. These options include content acceleration, individual or group research projects, peer teaching, and involvement in non-classroom activities discussed in the section on the continuum of services. A key feature of these options is that students have some freedom to make decisions about the topic and the methods through which the topic will be pursued. Curriculum compacting might best be thought of as *organized commonsense,* because it simply recommends the natural pattern that teachers ordinarily follow when individualizing instruction or teaching in the days before textbooks were "invented." Compacting might also be thought of as the "mirror image" of remedial procedures that have always been used in diagnostic/prescriptive models of teaching.

The second procedure for making adjustments in regular curricular material is the examination of textbooks in order to determine which parts can be economized upon through textbook analysis and "surgical" removal of repetitious drill and practice. The textbook *is* the curriculum in the overwhelming majority of today's classrooms; despite all of the rhetoric about school and curriculum reform, this situation is not likely to change in the near future. Until such time that high quality textbooks are universally available, it is essential to deal with the curriculum situation as it currently exists. Although curriculum compacting is one procedure that can be used to get an unchallenging curriculum "off the backs" of students who are in need of curriculum modifications, the procedure is a form of "damage control." Therefore, we need to take a more proactive stance to overcome the well-documented low levels of American textbooks.

The procedures for carrying out the textbook analysis and surgical removal process are based on the argument that "less is better" when it comes to content selection, and it is necessary to make wise decisions when determining which material will be covered in greater depth. The first step in the process might best be described as "textbook triage." Each unit of instruction is examined by grade-level teams to determine which material is needless repetition of previously covered skills and concepts. When repetition is eliminated, teachers then decide which material is necessary for review, and which material is important enough to cover in either a survey or an in-depth manner. What teachers teach is at the very heart of professional competency. The textbook analysis and surgical removal process offers teachers an opportunity to come together as a group of

professionals around specific tasks within and across grade levels and subject areas to perform these important operations.

Adding more in-depth learning experiences is the third curriculum modification procedure. This approach is based on the work of Phenix (1964), who recommends that a focus on representative concepts and ideas is the best way to capture the essence of a topic or area of study. Representative ideas or concepts consist of themes, patterns, main features, sequences, organizing principles and structures, and the logic that defines an area of study. Representative ideas and concepts can also be used as the bases for interdisciplinary or multidisciplinary studies.

While the use of representative concepts allows teachers to capture the essence of an area of study, it also allows them to introduce economy into content selection. The vast amount of material within any given discipline prevents unlimited coverage of content; therefore, material must be selected so that it is both representative and maximally transferable. Excellent resources are available to assist in this process. Books such as the *Dictionary of the History of Ideas* (Weiner, 1973) contain essays that cover every major discipline, and the emphasis of the essays is on interdisciplinary and cross-cultural relationships. The essays are cross-referenced to direct the reader to other articles which contain similar ideas in other domains. Additional resources can be found in books such as the *Syntopicon: An Index to the Great Ideas* (Adler, 1990), which lists concepts, ideas, and themes around which curriculum can be developed.

In-depth teaching is also concerned with the level of advancement or complexity of the material. First and foremost, the material must take into consideration the age, maturity, previous study, and background experiences of students. Beyond these considerations, three principles of content selection are recommended. First, curricular material should be selected so that it escalates along the hierarchy of knowledge dimensions: facts, conventions, trends and sequences, classifications and categories, criteria, principles and generalizations, and theories and structures. Second, movement toward the highest level, theories and structures, should involve continuous recycling to lower levels so that facts, trends and sequences, etc., can be understood in relation to a more integrated whole rather than as isolated bits of irrelevant information. Third, the cluster of diverse procedures surrounding the acquisition of knowledge, that dimension of learning commonly referred to as "process" or thinking skills, should be viewed as a form of content. These more enduring skills form the cognitive structures and problem solving strategies that have the greatest transfer value.

A final characteristic of in-depth learning is a focus on methodology. This focus is designed to promote an understanding of, and appreciation for, the *application* of methods to the kinds of problems that are the essence of fields of knowledge. The goal of this emphasis on methodology is to cast the young person in the role of a first-hand inquirer rather than a mere learner-of-lessons, even if this role is carried out at a more junior level than that of the adult professional. This role encourages young learners to engage in the kinds of thinking, feeling, and doing that characterizes the work of the practicing professional because it automatically creates confrontations with knowledge necessary for active rather than passive learning!

Enrichment Learning and Teaching

The third service delivery component of the SEM is enrichment learning and teaching. Enrichment learning and teaching is based on the ideas of a small but influential

number of philosophers, theorists, and researchers.[1] The work of these theorists, coupled with our own research and program development activities, has given rise to the concept we call enrichment learning and teaching. The best way to define this concept is in terms of the following four principles:

1. Each learner is unique, and therefore, all learning experiences must be examined for ways that take into account the abilities, interests, and learning styles of the individual.
2. Learning is more effective when students enjoy what they are doing, and therefore, learning experiences should be constructed and assessed with as much concern for enjoyment as for other goals.
3. Learning is more meaningful and enjoyable when content (i.e., knowledge) and process (i.e., thinking skills, methods of inquiry) are learned within the context of a real and present problem; and therefore, attention should be given to opportunities to personalize student choice in problem selection, the relevance of the problem for individual students at the time the problem is being addressed, and authentic strategies for addressing the problem.
4. Some formal instruction may be used in enrichment learning and teaching, but a major goal of this approach to learning is to enhance knowledge and thinking skills acquisition that is gained through formal instruction with applications of knowledge and skills that result from students' own construction of meaning.

The ultimate goal of learning that is guided by these principles is to replace dependent and passive learning with independence and engaged learning. Although all but the most conservative educators will agree with these principles, much controversy exists about how these (or similar) principles might be applied in everyday school situations. A danger also exists that these principles might be viewed as yet another idealized list of glittering generalities that cannot be manifested easily in schools which are entrenched in the deductive model of learning. Developing a school program based on these principles is not an easy task. Over the years, however, we have achieved a fair amount of success by gaining faculty, administrative, and parental consensus on a small number of easy-to-understand concepts and related services, and by providing resources and training related to each concept and service delivery procedure. Numerous research studies (summarized in Renzulli & Reis, 1994) and field tests in schools with widely varying demographics have been conducted. These studies and field tests have provided opportunities for the development of large amounts of practical know-how that are readily available for schools that would like to implement the SEM.

The Enrichment Triad Model

In order for enrichment learning and teaching to be systematically applied to the learning process, it must be organized in a way that makes sense to teachers and students. An organizational pattern called the Enrichment Triad Model (Renzulli, 1977a) is used for this purpose. The three types of enrichment in the model are depicted in Figure 4. Before discussing the role and function of each type of enrichment, it is necessary to discuss three considerations that relate to the model in general.

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[1] Although it is beyond the scope of this article to review the work of these eminent thinkers, the group includes William James, Alfred North Whitehead, John Dewey, Maria Montessori, Jean Piaget, Paul Torrance, Jerome Bruner, Philip Phenix, Howard Gardner, Robert Sternberg, and Albert Bandura.

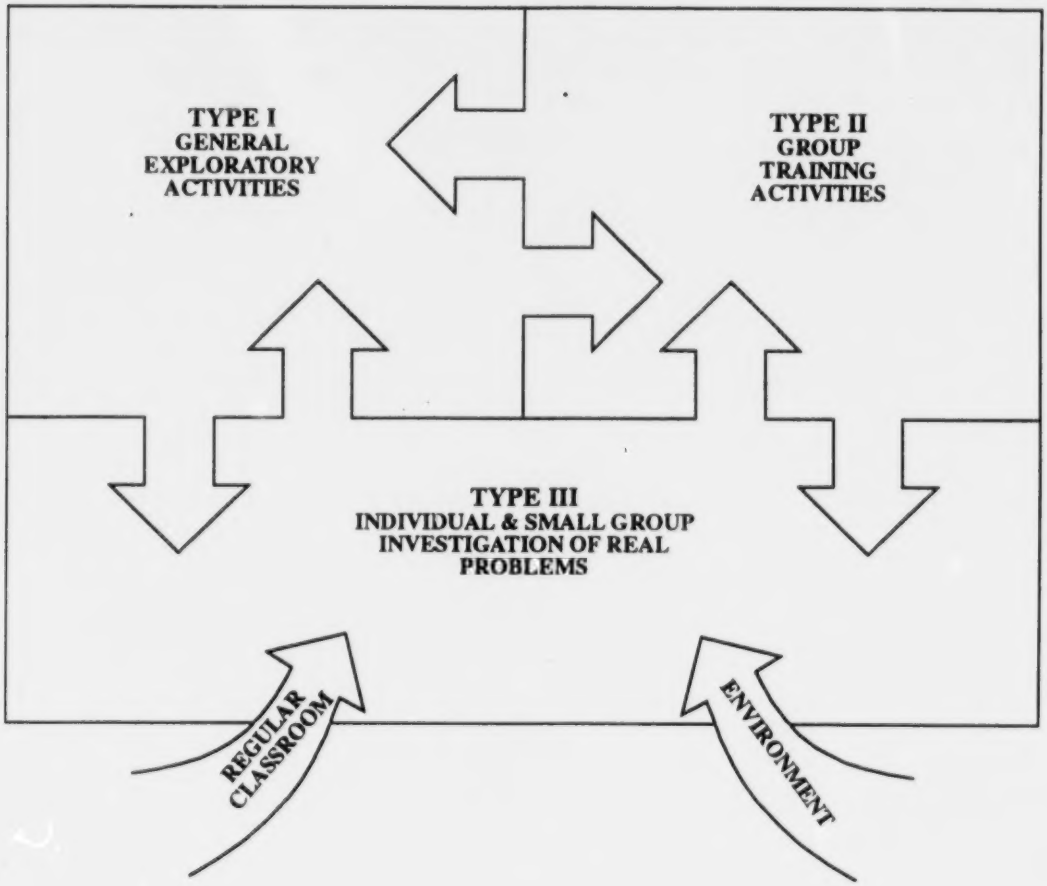

Figure 4. The Enrichment Triad Model.

Learning in a Natural Way

The Enrichment Triad Model is based on the ways in which people learn in a natural environment rather than the artificially structured environment that characterizes most classrooms. Just as scientists "look to nature" when they attempt to solve particular types of problems, the process of learning is examined as it unfolds in the non-school world. This process is elegant in its simplicity! External stimulation, internal curiosity, necessity, or combinations of these three starting points cause people to develop an interest in a topic, problem, or area of study. Humans are, by nature, curious, problem solving beings; but in order for them to act upon a problem or interest with some degree of commitment and enthusiasm, the interest must be a sincere one and one in which they see a personal reason for taking action. Once the problem or interest is personalized, a need is created to gather information, resources, and strategies for acting upon the problem.

Problem solving in nature almost always results in a product or service that has a functional, artistic, or humanitarian value. The learning that takes place in real-problem situations is *collateral learning* that results from attacking the problem in order to produce a product or service. It was precisely this kind of natural problem solving situation that gave

rise to the Enrichment Triad Model. The only difference between the natural learning that takes place in real life situations and the use of the Triad Model within the more structured world of the school is that we view products as vehicles through which a wide variety of more enduring and transferable processes can be developed. Learning that focuses on the interaction between product and process results in the kinds of learning experiences that enhance both the present and the future.

More Than a Sum of the Parts

A second general consideration about the Enrichment Triad Model is that the *interaction* between and among the three types of enrichment is as important as any type of enrichment or the collective sum of all three types. In other words, the arrows in Figure 4 are as important as the individual cells, because they give the model dynamic properties that cannot be achieved if the three types of enrichment are pursued independently. A Type I experience, for example, may have value in and of itself, but it achieves maximum payoff if it leads to Type II or III experiences. In this regard, it is a good idea to view Types I and II enrichment as "identification situations" that may lead to Type III experiences, which are the most advanced type of enrichment in the model. As Figure 4 indicates, the regular curriculum and the environment in general (i.e., non-school experiences) can also serve as pathways of entry into Type III activities. An identification situation is simply an experience that allows students and teachers an opportunity (1) to participate in an activity, (2) to analyze their interest in and reaction to the topic covered in the activity and the processes through which the activity was pursued, and (3) to make a purposeful decision about their interest in the topic and the diverse ways further involvement may be carried out. Type I and Type II are general forms of enrichment that are usually pursued with larger groups of students. Type III Enrichment, on the other hand, is pursued only on a voluntary and self-selected basis.

The interactiveness of the three types of enrichment also includes what are sometimes called the "backward arrows" in Figure 4 (e.g., the arrows leading back from Type III to Type I). In many cases, the advanced work of students (i.e., Type III) can be used as Type I and II experiences for other students. Thus, for example, a group of students who carried out a comprehensive study on lunchroom waste presented their work to other groups for both awareness and instructional purposes, and for purposes of stimulating potential new interests on the parts of other students. In this regard, the model is designed to renew itself and to bring students "inside" the pedagogy of the school enterprise rather than viewing learning from a spectator's perspective.

Personal Knowledge

A third consideration about the Enrichment Triad Model in general is that it is designed to help students gain personal knowledge about their own abilities, interests, and learning styles. If, as Socrates said, "The unexamined life is not worth living," then we should also consider a corollary to this axiom about life in school: "The unexamined lesson is not worth learning!" While it would be desirable to apply this corollary to all school experiences, the types of enrichment advocated in the Triad Model are excellent vehicles for examining preferences, tastes, and inclinations that will help students gain a greater understanding of themselves.

This corollary is operationalized in the model by recommending debriefings and post-learning analyses (sometimes called meta-learning) about both *what* has been learned, and *how* a particular segment of learning has been pursued. Following exposure to a particular instructional style, a careful post-learning analysis should be conducted that focuses on the unique properties of the purposefully selected instructional technique.

Students should be encouraged to discuss and record in personal journals their reactions to the instructional technique in terms of both efficiency in learning and the amount of pleasure they derive from the technique. The goal of the post-learning analysis is to help students understand more about themselves by understanding more about their preferences in a particular situation. Thus, the collective experiences in learning styles should provide: (1) exposure to many styles, (2) an understanding of which styles are the most personally applicable to particular subjects, and (3) experience in how to blend styles in order to maximize both the effectiveness and satisfaction of learning.

In the sections that follow, a brief description of each component of the Triad Model will be presented. It will be helpful to keep in mind that the Triad Model is part of the service delivery component that is targeted on three school structures: the regular curriculum, the enrichment clusters, and the continuum of special services. In many ways, enrichment learning and teaching can be thought of as an overlay which can be applied to these three school structures.

Type I Enrichment: General Exploratory Experiences

Type I Enrichment consists of general exploratory experiences that are designed to expose students to new and exciting topics, ideas, and fields of knowledge not ordinarily covered in the regular curriculum. This type of enrichment is carried out through a variety of procedures such as visiting speakers, demonstrations, mini visits, video presentations, interest centers, and the use of other audio visual and technological materials. Type I Enrichment and the debriefing which accompanies this type of enrichment represents an invitation to more advanced-levels of involvement with the topic or area of interest.

Type II Enrichment: Group Training Activities

Type II Enrichment consists of methods, materials, and instructional techniques that are designed to develop higher level thinking processes, research and reference skills, and processes related to personal and social development. Type II Enrichment is provided for all students within the regular curriculum, as well as students who are involved in enrichment clusters and self-selected, independent investigations. For example, students in a science class, who are involved with determining water quality of a local river above and below the location of a major industrial park, may need training in hypothesizing, data analysis, and research report writing. This training serves as motivation to participate in a self-selected, independent investigation. A small group of students engaged in a real world investigation related to oral history may need training on interview protocol, the use of tape recorder devices, and data analysis.

Type III Enrichment: Individual and Small Group Investigations of Real Problems

Type III Enrichment is the highest level of enrichment in which students can engage because they exchange their role from traditional lesson learner to first-hand inquirer. Type III Enrichment is distinguished from other types of enrichment by five essential elements: (1) a personal frame of reference, (2) a focus on advanced-level knowledge, (3) a focus on methodology, (4) a sense of audience, and (5) authentic evaluation.

First, a Type III Enrichment experience must be based on the interest of the individual or small group of students; students must "own" the real problem they will investigate. Second, this type of enrichment requires that students draw upon the roles and skills of practicing professionals. These skills include, for example, judging problem difficulty, apportioning time, and predicting outcomes. Third, Type III Enrichment

requires that students utilize authentic methodology. Students involved in a scientific investigation will employ the scientific method; students involved in video production will use the methodology of media experts in the field. A sense of audience is the fourth essential element in Type III Enrichment. It is the real audience which encourages students to improve the quality of their product and develop new and effective ways of communicating their findings. Finally, Type III Enrichment is characterized by authentic evaluation. Type III projects are products created using the methodology of a field; by necessity the products must be evaluated according to criteria provided by experts in the field and whether or not the product has the desired impact on the intended audience.

Schoolwide Enrichment and Educational Reform

Most efforts to make major changes in schooling have failed. Although there is endless speculation about why schools are so resistant to change, most theorists and policy makers have concluded that tinkering with single components of a complex system will give only the appearance of school improvement rather than the real and lasting change so desperately sought by educational leaders. Examples of single component tinkering are familiar to most educators. More rigorous curriculum standards, for example, without improved curricular materials and teachers able to use the materials effectively negates any potential value that new standards may have for improving academic performance. Similarly, single component tinkering designed to force change in classrooms (e.g., high-stakes testing) may create the illusion of improved achievement, but the reality is increased pressure on schools to expand the use of compensatory learning models that, so far, have contributed only to the "dumbing down" of curriculum and the lowering of academic standards. Teacher empowerment, school-based management, an extended school day and year, and revised teacher certification requirements are merely apparitions of change when state or central office regulations prescribe the curriculum by using tests that will determine whether schools get high marks for better performance.

How, then, do we establish an effective change process—one that overcomes the long record of failed attempts? The leverage for meaningful change depends upon breaking two mindsets: (1) that one person or single group knows the right answer, and (2) that change is linear. The only reasonable solution is to develop a process whereby the adoption of policy and the adoption of practice proceed simultaneously! Policy makers and practitioners in schools need to collaborate during all phases of the change process by examining local capacity and motivation in conjunction with the desired changes. Thus, neither policy makers nor practitioners, by themselves, can reform schools; instead both must come together to shape a vision and develop the procedures that will be needed to realize and sustain that vision. Senge (1990) compares "visioneering" to the hologram, a three-dimensional image created by interacting light sources. When a group of people come to share a vision,

> . . . each sees his or her own picture. Each vision represents the whole image from a different point of view. When you add up the pieces of the hologram, the image does not change fundamentally, but rather becomes more intense, more lifelike, more real in the sense that people can truly imagine achieving it. The vision no longer rests on the shoulders of one person [or one group], but is shared and embodies the passion and commitment of all participants. (Senge, 1990, p. 312)

The book on which this monograph is based has been developed around a shared vision that my colleagues in The Center for Talent Development at the University of Connecticut and I have had for a number of years (Renzulli, 1994). This vision is also

embraced by thousands of teachers and administrators with whom we have worked in academic programs and summer institutes that date back to the 1970s. *Simply stated, this vision is that schools are places for talent development.* Academic achievement is an important part of the vision and the model for school improvement described in the book; however, we also believe a focus on talent development places the need for improved academic achievement into a larger perspective about the goals of education. The things that have made our nation great and our society one of the most productive in the world are manifestations of talent development at all levels of human productivity. From the creators and inventors of new ideas, products, and art forms, to the vast array of people who manufacture, advertise, and market the creations that improve and enrich our lives, there are levels of excellence and quality that contribute to our standard of living and way of life.

This vision of schools for talent development is based on the belief that *everyone* has an important role to play in societal improvement, and that everyone's role can be enhanced if we provide all students with opportunities, resources, and encouragement to aspire to the highest level of talent development humanly possible. Rewarding lives are a function of ways we use individual potentials in productive ways. Accordingly, the SEM is a practical plan for making our vision of schools for talent development a reality. We are not naive about the politics, personalities, and financial issues that often supersede the pedagogical goals. At the same time, we have seen this vision manifested in schools ranging from hard core urban areas and isolated and frequently poor rural areas to affluent suburbs and combinations thereof. We believe that the strategies described provide the guidance for making any school a place for talent development.

We also recognize there are no quick fixes or easy formulas for transforming schools into places where talent development is valued and vigorously pursued. Our experience has shown, however, that once the concept of talent development catches on, students, parents, teachers, and administrators begin to view their school in a different way. Students become more excited and engaged in what they are learning; parents find more opportunities to become involved in all aspects related to their children's learning, rather than "around the edges" activities; teachers begin to find and use a variety of resources that, until now, seldom found their way into classrooms; and administrators start to make decisions that affect learning rather than "tight ship" efficiency.

Everyone has a stake in schools that provide all of our young people with a high-quality education. Parents benefit when their children lead happy and successful lives. Employers and colleges benefit when they have access to people who are competent, creative, and effective in the work they do and in higher educational pursuits. Political leaders benefit when good citizens and a productive population contribute to a healthy economy, a high quality of life, and respect for the values and institutions in a democracy. And professional educators at all levels benefit when the quality of schools for which they are responsible is effective enough to create respect for their work and generous financial support for the educational enterprise.

Everyone has a stake in good schools because schools create and *re*create a successful modern society. Renewed and sustained economic growth and the well-being of all citizens means investing in high-quality learning the same way that previous generations invested in machines and raw materials. Our schools are already dumping millions of functionally illiterate young people into the workforce; more and more colleges are teaching remedial courses based on material formerly taught in high school; and college graduates in almost all fields are experiencing difficulty entering career areas of choice.

Although everyone has a stake in good schools, America has been faced with a "school problem" that has resulted in declining confidence in schools and the people who

work in them, drastic limitations in the amount of financial support for education, and general public apathy or dissatisfaction with the quality of education our young people are receiving. The parents of poor children have given up hope that education will enable their sons and daughters to break the bonds of poverty. And the middle class, perhaps for the first time in our nation's history, is exploring government supported alternatives such as vouchers and tax credits for private schools, home schooling, charter schools, and summer and after-school programs that enhance admission to competitive colleges. A great deal has been written about America's "school problem," and studies, commissions, reports, and even a Governor's Summit Conference have been initiated to generate solutions to problems facing our schools. But the hundreds if not thousands of conferences, commissions, and meetings, and the tons of reports, proclamations, and lists of goals, have yielded minimal results, mainly because they generally focused on tinkering with traditional methods of schooling.

Three Key Ingredients of School Improvement

If the traditional methods of schooling have failed to bring about substantial changes, we must look to different models that show promise of achieving the types of school improvement we so desperately need. New models must focus their attention on three major dimensions of schooling—the act of learning, the use of time, and the change process itself.

Focus on the Act of Learning

School improvement must begin by placing the *act of learning* at the center of the change process. Organizational and administrative structures such as vouchers, site based management, school choice, multi-aged classes, parent involvement, and extended school days are important considerations, but they do not address *directly* the crucial question of how we can improve what happens in classrooms where teachers, students, and curriculum interact with one another. One of the things we have done in developing the SEM is to base all recommendations for school improvement on the learning process. It is beyond the scope of this summary to explain all components of the act of learning, but a figural representation of the learning process is depicted in Figure 5. The "Learner Circle" highlights important components that students bring to the act of learning. Thus, when examining the learner we must take into consideration: (1) present achievement levels in each area of study, (2) the learner's interest in particular topics and the ways in which we can enhance present interests or develop new interests, and (3) the preferred styles of learning that will improve the learner's motivation to pursue the material that is being studied. Likewise, the teacher and learner dimensions have subcomponents that must be considered when we place the act of learning at the center of the school improvement process (Renzulli, 1992).

The Use of Time

Although it would be interesting to speculate about why schools have changed so little over the centuries, at least part of the reason has been our unwillingness to examine critically the issue of school time. If the ways we currently use school time were producing remarkably positive or even adequate results, there might be an argument for maintaining the traditional schedule and calendar. But such is not the case.

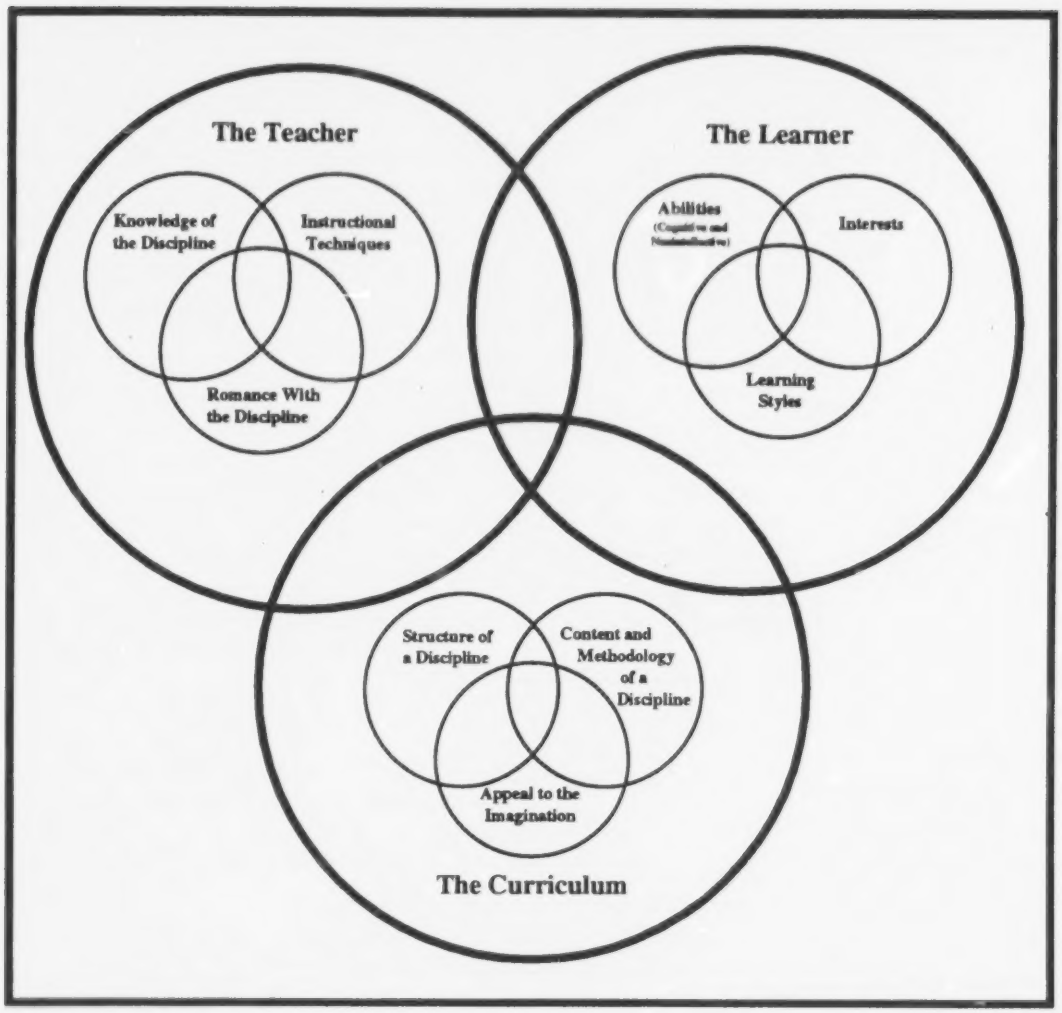

Figure 5. Figural representation of the Act of Learning.

A universal pattern of school organization that has emerged over the years has contributed to our inability to make even the smallest changes in the overall process of learning. This universal pattern is well known to educators and lay persons alike. The "major" subject matter areas (Reading, Mathematics, Science, Language Arts, and Social Studies) are taught on a regular basis, five days per week. Other subjects, sometimes called "the specials," such as Music, Art, and Physical Education, are taught once or twice a week. So accustomed have we become to the rigidity of this schedule that even the slightest hint about possible variations is met with a storm of protest from administrators and teachers. "We don't have time *now* to cover the regular curriculum." "How will we fit in the specials?" "They keep adding new things [Drug Education, Sex Education, etc.] for us to cover." Our uncontested acceptance of the elementary and secondary school schedule causes us to lose sight of the fact that at the college level, where material is ordinarily more advanced and demanding, we routinely drop from a five meeting per week schedule to a three-day-(and sometimes even two-day) per-week schedule of class meetings. And our

adherence to the more-time-is-better argument fails to take into account research that shows quite the opposite. For example, international comparison studies report that 8 of the 11 nations that surpass U.S. achievement levels in mathematics spend less time on math instruction than do American schools (Jaeger, 1992). In the Schoolwide Enrichment Model, a number of alternative scheduling patterns are based on selectively "borrowing" one or two class meetings per month from the major subject areas. This approach guarantees that a designated time will be available each week for advanced-level enrichment clusters.

A Gentle and Evolutionary (But Realistic) Approach to School Improvement

The approach to school improvement being recommended in this model is realistic because it focuses on those aspects of learning and development over which schools have the most influence, and, therefore, the highest probability of achieving success. Schools are being bombarded with proposals for change. These proposals range from total "systemic reform" to tinkering with bits and pieces of specific subjects and teaching methods. Oftentimes the proposals are little more than lists of intended goals or outcomes, and limited direction is provided about how these outcomes can be achieved. Even less information is provided about the effectiveness of recommended practices in a broad range of field test sites. Worse yet are the mixed messages that policy makers and regulators are beaming at schools at an unprecedented rate, messages that are often incompatible with one another. One state, for example, mandated a core curriculum for students, but then evaluated teachers on the basis of generic teaching skills that had nothing to do with the curriculum. Schools are encouraged to raise their standards, and advocates of site-based management encourage teachers to become more active in curriculum development. But these same schools are rated on the basis of test scores tied to lists of state specified, outcome-based competencies. A recent study (Madaus, 1992) showed that the most widely used tests measure low level skills and knowledge, and that teachers are under pressure to emphasize this kind of material because it shows up on the tests. The study also reported that teachers and administrators believed the tests forced them to compromise their ideals about good teaching. In another study (Olson, 1992), researchers asked a group of teachers how they would evaluate school reform initiatives in their schools. They replied, "There's nothing but chaos. Our best strategy is to ignore them and close our doors and go about our business."

We believe that school improvement can be initiated and built upon through gentle and evolutionary strategies for change. These strategies must first and foremost concentrate on the act of learning as represented by the interactions that take place between and among learners, teachers, and the curriculum. In the early stages of the change process, these strategies should make minimal, but specific, suggestions for change in existing schedules, textbook usage, and curricular conventions. And these strategies should be based on practices that have already demonstrated favorable results in places where they have been used for reasonable periods of time and with groups from varying ethnic and economic backgrounds. We also believe that the individual school building is the unit-of-change for addressing school improvement, and that effective and lasting change can only occur when it is initiated, nurtured, and monitored from within the school itself. Outside-of-school regulations and remedies have seldom changed the daily behaviors of students and teachers or dealt effectively with solutions to inside-of-school problems (Barth, 1990). A simple but sincere waiver of top-down regulations, a plan that involves consensus and shared decision making on the parts of administrators, parents, and teachers, and incentives for specific contributions to the change process are the starting

points and the only "big decisions" policy makers need to make in order to initiate a gentle and evolutionary school improvement process.

Our goal in the Schoolwide Enrichment Model is not to replace existing school structures, but rather to apply the strategies and services that define the model to improve the structures to which schools have already made a commitment. Thus, for example, if a school has adopted national standards or outcomes, whole language learning models, or site-based management, the purpose of SEM is to influence these structures in order to maximize their effectiveness. We view this process as an infusion rather than an add-on or replacement approach to school improvement. The main targets of the process are those factors that have a direct bearing on the act of learning. Evaluations of SEM programs (Olenchak & Renzulli, 1989) have indicated that the model is systematic, inexpensive to implement, and practical in a common sense-sort of-way that makes it appealing to both professionals and lay persons.

How to Start a School Improvement Process

As is always the case with any change initiative, a person or small group becomes interested in something they believe will be good for their school. If this happens, the following series of actions are recommended,

The principal and representatives of groups in the nuclear family should form a steering committee. There are only three guidelines for the steering committee as it embarks on a process for *exploring* the plan. (The word exploring is emphasized because consensus must be reached at each step of the process in order for the plan to work.) First, all steering committee members should be provided with information about the Schoolwide Enrichment Model so that they are well informed and can engage in an intelligent discussion and debate about whether or not they are interested in the plan. All steering committee members should have equal rights and opportunities to express their opinions. If a majority decision is reached to recommend the plan to the school community at large, information should be made available to all faculty and parents. Older students (middle grade and above) should also be asked to participate in the discussions.

Second, the steering committee should arrange a series of discussion group meetings that are open to and include members of all subgroups in the school's nuclear family. In setting up the discussion groups, it is important to avoid separate parent groups, teacher groups, and administrator groups. Grouping by role is a classic error that has plagued understanding and communication in the school community, and it is the main contributor to the "Us-And-Them" mentality that pits one group against another. Printed information, key diagrams and charts, and the results of steering committee deliberations should be brought to the attention of the discussion groups. The discussion groups should elect a chairperson and recorder, they should remain intact for the duration of the examination process, and they should set a mutually acceptable schedule of meeting dates and times. The meetings should continue until everyone has had a chance to express his or her opinions, after which a vote should be taken as to whether or not to proceed with the plan. Voting results from each discussion group should be reported to the steering committee, and a report of all the votes should be issued to the nuclear school family. The report should also contain each group's suggestions and concerns. If at least two-thirds of the persons voting express an interest in going ahead with the plan, the steering committee should make arrangements to meet with the superintendent or appropriate central office personnel. Once again, descriptive material about the model should be provided, and the model characterized as a pilot or experimental venture. Assurances should be given that

there is no intention to replace any of the programs or initiatives that the district has already adopted. The fastest way to get a polite but firm rejection from the central office is to threaten existing programs or policies to which decision makers already have made a commitment. It is worth repeating that our goal is to *infuse* exemplary learning and teaching opportunities into the existing school frameworks.

A third guideline is concerned with strategies for overcoming roadblocks that might occur during one of the above stages of the examination process. Any plan for school change is a lightning rod for naysayers, self-proclaimed experts, and people who are reluctant to endorse almost anything involving thinking or doing something differently. The problem is an especially sticky one if these persons occupy positions of authority or informal status in the school community, or if they are particularly adept at creating negative energy that is not easily overcome. Such persons, like all others, should have an opportunity to express their opinions in a democratic process. But in order for a majority opinion to be the deciding factor in determining whether or not the model is adopted, it may be necessary to pursue strategies that insure majority rule.

What's in It for Me?

Although everyone has a stake in good schools, it would be naive to assume that already overburdened professionals, or parents who have had a limited impact on school change historically, will make a commitment to a new initiative which requires time, energy, and participation in activities that are a departure from the *status quo*. Each person examining the SEM should ask himself or herself: What's in it for me? What will I have to do? What will I have to give or give up? What will I get out of it? Policy makers and administrators should examine these questions with an eye toward the kinds of public support necessary for adequate, and perhaps even generous financial commitments to public education. The tide of criticism that is constantly being directed toward our schools has taken its toll in the extent to which the public is willing to pay for public education, and it has also resulted in low morale at all levels of the profession. Education is rapidly becoming a profession without an ego because of this criticism. Schools in other nations are constantly being held up to us as mirrors for pointing out our own inadequacies; hardly a month passes without someone writing yet another article or news story about the crisis in educational leadership. It would be nice to think that some magical force will "save us," but the reality is that leadership for better schools can come only from people who are responsible for schools at the local level.

More than any other group, teachers will have to ask themselves these hard questions. Almost every teacher has, or at one time had, an idea about what good teaching is all about. And yet, it is not an exaggeration to say that most teachers are dissatisfied with their work and with the regulations and regimentation imposed on their classrooms. A recent report (McLaughlin & Talbert, 1993) on teachers' response patterns to classroom practices indicated that teachers who adapt to traditional practices ". . . become cynical, frustrated, and burned out. So do their students, many of whom fail to meet expectations established for the classroom" (p. 6). We still, however, must raise the questions: Are there benefits for teachers who are willing to take on the challenge of variations in traditional practice? Can we avoid the cynicism, frustration, and burnout that seems to be so pervasive in the profession? The SEM is designed to provide opportunities for a better "brand" of teaching through the application of more engaging teaching practices.

Finally, parents must examine the above questions with an eye toward the kind of education they want for their sons and daughters. The SEM is not intended to replace the schools' focus on traditional academic achievement, but it does emphasize the development of a broader spectrum of the multiple potentials of young people. Schools do not need to

be places to which so many of our young people dread going, but in order to make schools more enjoyable places, parents must have an understanding of and commitment to an education that goes beyond the regimentation and drill that is designed only to "get the scores up." Schools are places for developing the broadest and richest experiences imaginable for young people.

The automobile is a metaphor for the Schoolwide Enrichment Model. The school is the automobile (hopefully a Porsche), and the principal is the driver, hopefully bold and daring like Mario Andretti or Amelia Earhart. The faculty is the engine, loaded with power and constantly being tuned-up to make it more efficient and effective. Members of the enrichment teams are the spark plugs, igniting the energy with above-and-beyond-the-call-of-duty activities. And the SEM specialist is the ignition and the distributor, initiating new developments and directing the flow of resources and energy to appropriate places. We have learned a great deal about enrichment learning and teaching during several years of experimentation in urban, suburban, and rural schools throughout North America and overseas. The atmosphere is favorable for a broader application of these strategies and techniques that originated in special programs, and they can serve as a basis for making all schools laboratories for talent development.

Most Frequently Asked Questions About Schools for Talent Development[2]

1. What about our existing Talent Pool? Should we continue to identify our gifted students?

The need to maintain traditional practices with respect to identification is a *local decision.* Our experience with SEM indicates that some districts are ready to move to a more inclusive approach with respect to high-end learning opportunities and have allocated funds on a per-pupil basis to provide these learning activities. Other districts, where mandates exist to identify and provide services to their high achieving students, continue to identify students in the traditional fashion. Regardless of the position of the district with respect to identification, high-end learning opportunities *can be blended into* the traditional curriculum for all students. District teams are encouraged to begin implementing Schoolwide Enrichment Model (SEM) using component(s), e.g., Total Talent Portfolios, enrichment clusters, curriculum compacting, that are most compatible with existing school structures and are most defensible.

2. Do we really need an enrichment specialist?

Absolutely. The services of an enrichment specialist are essential as districts move towards a talent development model. Enrichment specialists will find themselves providing not only face-to-face activities to students, but also resource and leadership services. Face-to-face activities include small group teaching and mentoring, direct coaching and supervision of enrichment projects, and coordinating mentorships with faculty or community resource persons. Leadership responsibilities include, for example, peer coaching and staff development, work with enrichment teams, public relations, program evaluation and monitoring, reviewing curriculum materials, and communications, such as newsletters and administrative updates. The job of the enrichment specialist will remain a critical one until the time that high-end learning opportunities are available to all students in order to maximize individual potential.

3. Isn't this new plan for school improvement really watering down our present services to the detriment of our high ability students?

Absolutely not. This model for talent development retains all high-end learning opportunities. These opportunities, such as curriculum compacting, and enrichment activities continue to be provided to traditionally identified students. This model extends high-end learning to all students so that they have an opportunity to benefit from the know-how that has been developed by those in gifted education over the past years.

Our experience suggests that parents of traditionally identified students can be reluctant to adopt the philosophy of SEM and its new components. Clearly, they are concerned that their child will no longer receive the critical services of the past. Accordingly, it is especially important to assure these parents that their child's strengths will continue to be addressed through curriculum compacting, interest development activities, group skill training, and opportunities for self-selected independent investigations of real world problems.

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[2] Developed by Jeanne H. Purcell and Joseph S. Renzulli.

4. Why do we have to have pull-out clusters? Can't these activities take place in the regular classroom, thereby reducing the disruption to the schedule?

Enrichment clusters are non-graded groups of students who come together because they share a common interest. The reason for the existence of the clusters is to provide an opportunity for students from *different classes and grades* to share their passion for a subject. To restrict the cluster concept to students from one classroom denies participants the opportunity to build upon the passion of students from other classes and grades who share the same interest.

5. I do not believe that all members of my faculty will want to be involved with the clusters because it will mean a restructuring of their school day. What do we do when some teachers do not want to be involved?

Three different initiatives can be used in this situation. First, clusters may be started by only those who are sincerely interested in the concept. Specifically, clusters can be initiated by those in a department, in one grade level, or in one school. Word about the success of the initiative will spread and help to convince other professionals of its value. Second, administrative support may be an alternative. The extent of administrative support depends upon the degree of administrative involvement at the time SEM was adopted by the district. If administrators were involved in the adoption process and ownership of the program exists, administrative encouragement and support may be the key to convincing reluctant teachers to become involved with enrichment clusters. The third initiative involves the substitution of a professional who is enthusiastic about implementing enrichment clusters for one who maybe reluctant. Clearly, this initiative works only in those districts where the cluster concept is being implemented on a small scale–that is, in one grade or one department–and opportunities exist for substitution.

6. What about the students who never want to participate in anything because they lack interest? Do I force children to be involved with an enrichment cluster?

Students should not be forced into participating in a cluster, and the proper "front-end" work on the part of practitioners will minimize the likelihood of large numbers of reluctant students. Most important, clusters should be constructed *after* students' interests have been assessed. Our experience with preliminary interest assessment indicates that most students' interest can be accommodated in the initial set of cluster offerings. If, by chance, a student's interest area cannot be honored in the first set, special efforts need to be made to honor this student's interests in the second set of cluster offerings provided at a later date.

7. Won't the enrichment cluster format "water down" these services for highly able students because the group will be so heterogeneous and multi-aged?

Rather that "water down" services for high achieving students, we believe that enrichment clusters provide additional opportunities for high-end learning activities. Most important, the passion that enrichment cluster participants share escalates the level of the learning activity. Second, learning opportunities are heightened because students have the opportunity to become first-hand inquirers; they will be constructing knowledge as they produce a product or provide a service. Finally, it is important to note that participants will self-select themselves into clusters within the cluster. For example, students who decide to

produce a school newspaper will quickly become reporters, editors, or photographers. It is the opportunity to become the expert within a cluster that provides additional high-end learning opportunities.

8. It seems to me that scheduling enrichment clusters into the secondary schedule will be a much more difficult task than scheduling them into the elementary schedule. We have so many students who are taking Advanced Placement and University Credit Programs. How do we accommodate this new component into the already full secondary schedule?

Albert Einstein once said that "All that is valuable in society depends upon the opportunity for development accorded an individual." We need to look at the spectrum of opportunities we provide for students as we seek to encourage and develop their talents. Advanced Placement and University Credit Programs are viable opportunities for talent development for those students who need accelerated programs. We must realize, however, that acceleration is only *one* option for talent development. Students also need opportunities to broaden or enrich their talents in self-selected areas. Additionally, they need opportunities be become producers of knowledge.

With respect to the time issue, we simply have to become more creative with the ways we utilize school time. Recent articles and books document different plans and techniques for finding time within the existing school schedule for teachers to collaborate and provide student programs. Examples include:

Carroll, J. M. (1989). *The Copernican Plan: Restructuring the American high school.* Andover, MA: The Regional Laboratory for Educational Improvement of the Northeast and the Islands.

Donahoe, T. (1993). Finding the way: Structure, time and culture in school improvement. *Phi Delta Kappan, 75*(4), 298-305.

Raywid, M. A. (1993). Finding time for collaboration. *Educational Leadership, 51*(1), 30-34.

9. In what ways do the enrichment clusters address the needs of high ability children?

Enrichment clusters provide high-achieving students with the opportunity to (1) participate in learning activities in area an of their interest, (2) share their passion with other students and adults who have common interests, (3) pursue that interest to a depth and at a pace commensurate with their abilities, (4) select a product or service related to the area of interest, and (5) become a first-hand inquirer. Essentially, clusters differentiate learning by content, process, product, and environment.

10. How do we group children in the clusters? We can't possibly have students, K-6, together, can we?

We believe that students of diverse ages can be grouped together in a cluster. The determining factor is not the *age* of the students, but the *nature* of the cluster. For example, students of any age can play key roles in The Young Playwright's Guild, The Young Entomologist's Society, or The Creative Furniture Design Company.

11. I am the school newspaper advisor. We meet before school and after school once or twice a week, My club already acts like an enrichment cluster. Why can't we just form more clubs, meet before and after school and not disrupt the regular schedule?

We certainly encourage the continuation of existing clubs and other similar activities because they have served as de facto enrichment clusters. We believe that enrichment clusters must also become regular school structures that operate during the school day if we are to make significant progress toward developing the talent potential of all students. If clusters meet only after school, (1) they will always be perceived as an extra rather than an integral part of the educational process, and (2) some students will be prohibited from attending.

To summarize, clubs and other after school activities must continue. Additionally, enrichment clusters must be added into the regular school day to serve the interests of all students, and those students who are involved in after-school jobs are other similar commitments.

12. In order to run these clusters, teachers will have to devote an incredible amount of time to organizing and collecting resources. What about teachers who go along with the concept, but just aren't willing to put in the time and energy to facilitate products that children can be proud of?

The quality of products will depend, in large part, on the motivation of the facilitator in the cluster. Accordingly, those in charge of implementing clusters must do all they can to promote the motivation of those in facilitating positions. Several strategies can be used to insure the success of facilitators. First, it is important to match carefully teachers and community members with clusters that reflect their interest. Second, tentative facilitators can be teamed with a parent volunteer or mentor in the selected area. Finally, evaluations of the clusters need to be conducted. Students and facilitators need the opportunity to review their work, recognize their accomplishments, and be provided with specific ways and encouragement to improve upon past performances.

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Glossary

Continuum of Special Services—This continuum reflects the high-level learning options offered to all students in a school district. Examples of high-level learning opportunities include, for example: enrichment clusters, curriculum compacting, other curriculum modification techniques, flexible grouping options, mentorships, and special programs, such as Future Problem Solving, Community Problem Solving, Model United Nations, and history and essay contests.

Curriculum Compacting—A systematic procedure for modifying or streamlining the regular curriculum in order to eliminate previously mastered material

Enrichment Clusters—Non-graded groups of students who come together during specified blocks of time during the school day to pursue common interests

Enrichment Learning and Teaching—A series of four concepts or principles which are cornerstones of the SEM model. These principles include:

1. Each learner is unique and, therefore, all learning experiences must be examined for ways that take into account the abilities, interests, and learning styles of the individual.
2. Learning is more effective when students enjoy what they are doing.
3. Learning is more meaningful and enjoyable when content (knowledge) and process (thinking skills, methods of inquiry) are learned within the context of real problems.
4. Students' constructions of meaning are as important as teachers' instructions.

Enrichment Triad Model—An instructional pattern for delivering enrichment learning and teaching. It consists of three types of enrichment activities: general exploratory activities (Type I), which are investigations for students to pursue topics in-depth; group training activities (Type II), which consist of methods, materials, and instructional techniques to develop students' higher level thinking processes; and students' self-selected, real-world investigations of selected topics (Type III).

Organizational Components—Materials, resources, and processes which support the direct services to students

Regular Curriculum—Consists of anything and everything that is part of the predetermined goals, schedules, learning outcomes, and delivery systems of the school

School Structures—Settings where learning takes place

Schoolwide Enrichment Model Network—An international electronic network which provides practitioners with opportunities to (1) search data bases for information about enrichment resources, completed Type III investigations, and student fairs, competitions, and contests, and (2) collaborate with other educators regarding their experiences and ongoing work with SEM.

Service Delivery Components—Direct services to students

Total Talent Portfolio—A vehicle for systematically recording and acting upon the strengths and talents of students

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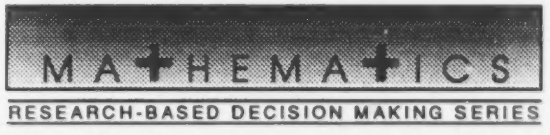

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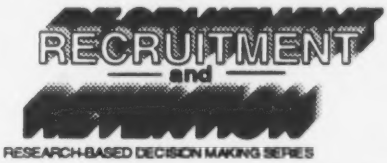

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